



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,779	11/20/2001	Robert Raymond Miller II	2001-0067	2039

7590 07/31/2007
S H Dworetsky
AT&T Corp
One AT&T Way
Room 2A 207
Bedminster, NJ 07921

EXAMINER

FOX, BRYAN J

ART UNIT	PAPER NUMBER
----------	--------------

2617

MAIL DATE	DELIVERY MODE
-----------	---------------

07/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/989,779
Filing Date: November 20, 2001
Appellant(s): MILLER LL ET AL.

MAILED

JUL 31 2007

Technology Center 2600

Kin-Wah Tong
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed August 24, 2005 appealing from the Office action mailed April 15, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,787,122	Suzuki	7-1998
6,363,062	Aaronson et al	3-2002

Khayrallah, A. "Improved Time-Diversity Methods for Digital Cellular Telephone Receiver" XP-000889044, 08-1999

Struhsaker et al, "Wireless Access System and Associated Method Using Multiple Modulation Formats in TDD Frames According to Subscriber Service Type" US Patent Application Publication No. 2002/0141355 A1, 10-2002

Ohashi, M. "Diversity Radio Communication System" European Patent Application No. EP 0740430A2, 10-1996

Sampath et al, "Adaptive Channel Estimation for Wireless Systems" US Patent Application Publication No. 2003/0012308 A1, 01-2003

(9) Grounds of Rejection

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 8, 9, 11, 13, 15, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki (US005787122A).

Regarding claim 1, Suzuki discloses a reception system where an amplifier 73, a demodulator 74, a deinterleave circuit 75 and a decoder 76 are coupled to one of a plurality of antennas 71a-m via switch 72s, which reads on the claimed "first and second antennas connected to RF processing circuitry by an RF switch", where each time the antenna switcher 72 receives burst data, the antenna switches the antenna under

control of the communication control unit 78 (see column 9, lines 13-20 and figure 10), which reads on the claimed "an RF switch control in communication with said RF switch, said RF switch control for switching between said first and second antennas in response to a predefined schedule of a sequence of scheduled packet bursts," wherein the system disclosed by Suzuki is a TDMA system (see column 6, lines 12-19) so all transmissions and receptions are according to a predefined schedule of a sequence of scheduled packet bursts.

Regarding claim 4, Suzuki discloses that an encoded signal dispersed into a plurality of symbols interleaved over a plurality of burst data (see column 8, line 62 – column 9, line 12), so the burst data are related as claimed. Each time the antenna switcher 72 receives burst data, the antenna switches the antenna under control of the communication control unit 78 (see column 9, lines 13-20 and figure 10), which reads on the claimed "the antennas are switched so that each antenna receives a related packet burst".

Regarding claim 8, Suzuki discloses a reception system that receives an encoded signal dispersed into a plurality of symbols interleaved over a plurality of burst data (see column 8, line 62 – column 9, line 12), where each time the antenna switcher 72 receives burst data, the antenna switches the antenna under control of the communication control unit 78 (see column 9, lines 13-20 and figure 10), which reads on the claimed "receiving each of the packet bursts individually at one of a plurality of antennas in accordance with a predefined schedule," wherein the system disclosed by Suzuki is a TDMA system (see column 6, lines 12-19) so all transmissions and

receptions are according to a predefined schedule of a sequence of scheduled packet bursts. In the case where the antennas are selected in a predetermined sequential order, the limitation of, "where said predefined schedule is used to select one of said plurality of antennas for receiving each of said packet bursts," is met. If a signal is dispersed into a plurality of symbols interleaved over a plurality of burst data, it must be transmitted as such, which reads on the claimed "transmitting a message contained within a plurality of packet bursts at spaced time intervals".

Regarding claim 9, Suzuki discloses that one antennas 71a-m at a time is connected to the receiver circuitry 73-76 (see figure 10), and that the antennas may be selected in the previously-determined sequential order (see column 9, lines 21-24), which reads on the claimed "each of the plurality of the antennas is connected to a radio receiver at separate times relative to other antennas".

Regarding claim 11, Suzuki discloses a system where an encoded signal dispersed into a plurality of symbols interleaved over a plurality of burst data (see column 8, line 62 – column 9, line 12), which reads on the claimed "a message is spread across the plurality of packet bursts by space-time coding".

Regarding claim 13, Suzuki discloses a transmission/reception system where both a transmitter and a receiver are selectively coupled to a plurality of antennas (see figure 10, which reads on the claimed "communication system for coupling a transmitter and a receiver", and receives an encoded signal dispersed into a plurality of symbols interleaved over a plurality of burst data (see column 8, line 62 – column 9, line 12), where each time the antenna switcher 72 receives burst data, the antenna switches the

Art Unit: 2617

antenna under control of the communication control unit 78 (see column 9, lines 13-20 and figure 10), which reads on the claimed "adapted for receiving at least first and second signal bursts by first and second antennas respectively, and responding to the two signal bursts to communicate a singly unified message at the receiver", and "the first and second signal bursts are sequentially separated in time; the first and second antennas are sequentially enabled to communicate to storage at the receiver" where the output terminal 77 receiving the demodulated, deinterleaved, decoded data (See figure 10) reads on the claimed "at least one storage medium at the receiver". The processing of the reception signal includes deinterleave processing for deinterleaving the switched signal over a plurality of burst data to provide data in the original order (see column 9, lines 45-53), which reads on the claimed "enabling a representation of the unified message by responding to the first and second signal bursts". The system disclosed by Suzuki is a TDMA system (see column 6, lines 12-19) so all transmissions and receptions are according to a predefined schedule as claimed.

Regarding claim 15, Suzuki discloses that the plurality of symbols are part of the same signal (see column 8, line 62 – column 9, line 12), which reads on the claimed "the first and second signal bursts are each a part of a space-time coded message spread across two bursts". The processing of the reception signal includes deinterleave processing for deinterleaving the switched signal over a plurality of burst data to provide data in the original order (see column 9, lines 45-53), which reads on the claimed "a common message is derived from the sequential signal bursts received by the first and second antennas".

Regarding claim 16, Suzuki discloses that the reception signal is deinterleaved by deinterleaving circuit 75 so that it is reconverted into the original data (see column 9, lines 31-35), which reads on the claimed "said enabling includes retaining the first and second signal bursts in said at least one storage medium and processing to deliver the single unified message".

Regarding claim 18, Suzuki discloses that the processing of the reception signal includes deinterleave processing for deinterleaving the switched signal over a plurality of burst data to provide data in the original order (see column 9, lines 45-53) and that the burst data are received on a plurality of antennas (see column 9, lines 18-20), which reads on the claimed "said deriving the common message includes selecting a message from one of the receiving antennas".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2, 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki in view of Aaronson et al (US006363062B1).

Regarding claim 2, Suzuki fails to expressly disclose the use of a MAC protocol.

In a similar field of endeavor, Aaronson et al discloses a radio system where the MAC layer schedules communication bursts (see column 4, lines 22-63) taking into account factors such as propagation delay between the different nodes, queuing of data and synchronization of the time transmitting from multiple nodes (see column 3, lines 22-30).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Suzuki with Aaronson et al to include the above MAC layer in order to use the advantages of a MAC protocol such as more efficient use of the spectrum at a given region as suggested by Aaronson et al (see column 3, line 66 – column 4, line 2).

Regarding claim 3, Suzuki fails to disclose that the RF switch control is a MAC processor.

In a similar field of endeavor, Aaronson et al discloses that the MAC algorithm should synchronize the time of transmitting from multiple nodes (see column 3, lines 22-29).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Suzuki with Aaronson et al to include the above MAC layer in order to use the advantages of a MAC protocol such as more efficient use of the

spectrum at a given region as suggested by Aaronson et al (see column 3, line 66 – column 4, line 2).

Regarding claim 12, Suzuki discloses that transmission data is encoded by encoder 22 and interleaved by an interleaver 23 under control of a communication control unit 28 which controls transmission processing, which reads on the claimed “signal processing”. Suzuki fails to expressly disclose the use of a protocol.

Aaronson et al discloses a radio system where the MAC layer schedules communication bursts (see column 4, lines 22-63) taking into account factors such as propagation delay between the different nodes, queuing of data and synchronization of the time transmitting from multiple nodes (see column 3, lines 22-30).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Suzuki with Aaronson et al to include the above MAC layer in order to use the advantages of a MAC protocol such as more efficient use of the spectrum at a given region as suggested by Aaronson et al (see column 3, line 66 – column 4, line 2).

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohashi et al in view of Khayrallah (XP-000889044).

Regarding claim 5, Ohashi discloses a diversity radio communication system where an antenna switch circuit 10 switches the first and second antennas 11 and 12 to connect them to the transmit/receive switch circuit 9 (see page 6, lines 1-8), which reads on the claimed invention that receives communications from a transceiver at a

transmission station by wireless transceivers at receiving stations having switched protocol diversity reception operational modes, and uses this configuration to receive data from first and second antennas. The received data is stored in the temporary memory 2 of the memory 3 (see page 6, lines 38-40), which reads on the claimed "recording the received bursts as soft information in a storage medium". Ohashi et al fails to expressly disclose the combining of information.

In a similar field of endeavor, Khayrallah discloses an improvement of time-diversity methods where a receiver cycles through groups of antennas and the antennas within a group are combined by the receiver chains (see paragraph 3), which reads on the claimed "combining the soft information from the first and second bursts into a single message". Furthermore, Khayrallah discloses that antenna switching is preferably but not necessarily done before a new slot is to be received, which reads on the claimed "enabling a first antenna to receive a first packet burst in accordance with said predefined schedule; enabling a second antenna to receive a second packet burst in accordance with said predefined schedule," wherein the system may be a TDMA system (see paragraph 5) so all transmissions and receptions are according to a predefined schedule.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Ohashi et al with Khayrallah to include the above combining of data in a TDMA system in order to improve the time-diversity methods as suggested by Khayrallah (see the title).

Regarding claim 6, the combination of Ohashi et al and Khayrallah discloses that when a detected error is uncorrectable, the terminal unit on the receiver side recognizes it as a receiving error and sends a response indicating the error to the transmitter side, requesting re-transmission of the same data, and the same data is re-transmitted (see Ohashi et al page 10, line 57 – page 11, line 2) and simultaneously, the receiving error count is increased by 1 and the receiving antenna is switched (see Ohashi et al page 11, lines 39-47), so in this case the same data would be received by two different antennas as claimed.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohashi et al in view of Khayrallah as applied to claim 5 above, and further in view of Suzuki.

Regarding claim 7, the combination of Ohashi et al and Khayrallah fails to expressly disclose a message spread across packet bursts.

In a similar field of endeavor, Suzuki discloses a system that receives an encoded signal dispersed into a plurality of symbols interleaved over a plurality of burst data (see column 8, line 62 – column 9, line 12), which reads on the claimed “each packet burst contains a portion of a space-time coded message spread across the first and second packet bursts”.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Ohashi et al and Khayrallah with Suzuki to include the above signal dispersed into a plurality of symbols in order to use the advantages of burst signals such as the fact that transmission data are dispersed and

thus can be transmitted from a plurality of antennas which improves the S/N of the reception signal as suggested by Suzuki (see column 8, lines 12-18 and figure 5).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki in view of Struhsaker et al (US 20020141355A1).

Regarding claim 10, Suzuki fails to expressly disclose that each packet burst includes a complete message.

In a similar field of endeavor, Struhsaker et al discloses that a packet data unit may be a complete packet transmission or a fragment of a much larger message (see page 12, paragraph 159).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Suzuki with Struhsaker et al to include the above inclusion of a complete message in a packet burst in order to avoid wasting bandwidth with additional MAC headers as suggested by Struhsaker et al (see page 12, paragraph 159).

Claims 14, 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki in view of Ohashi et al.

Regarding claim 14, Suzuki fails to expressly disclose that signal bursts would include identical packets.

In a similar field of endeavor, Ohashi et al discloses that when a detected error is uncorrectable, the terminal unit on the receiver side recognizes it as a receiving error and sends a response indicating the error to the transmitter side, requesting re-

Art Unit: 2617

transmission of the same data, and the same data is re-transmitted (see page 10, line 57 – page 11, line 2), which reads on the claimed “first and second signal bursts are identical packets of a common message”.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Suzuki with Ohashi et al to include the above retransmission of the same data in order to prevent the loss of data.

Regarding claim 17, Suzuki fails to expressly disclose selecting a message from one of the antennas.

In a similar field of endeavor, Ohashi et al discloses a system where, when an error is detected, the antenna is switched and the information is re-transmitted (see page 10, line 57 – page 11, line 2), which reads on the claimed “selecting a message from one of the antennas”.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Suzuki with Ohashi et al to include the above retransmission in order to minimize errors in the system.

Regarding claim 21, Suzuki fails to expressly disclose sending a message to the transmitting end to cease further bursts.

In a similar field of endeavor, Ohashi et al discloses a system where, when an error occurs, a response indicating the error is sent to the transmitting end, requesting re-transmission of the same data (see page 10, line 57 – page 11, line 2), and this process is continued until a re-transmission upper-limit is reached (see page 11, lines 5-14). If no error occurs, no message requesting re-transmission is sent.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Suzuki with Ohashi et al to include the above re-transmission in order to avoid the loss of data. The combination of Suzuki and Ohashi et al fails to disclose the sending of a message to cease re-transmissions. This difference is not critical to the invention however, and it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Suzuki and Ohashi et al to operate such that, instead of a message requesting retransmission being sent, a message ceasing retransmission is sent in order to automatically retransmit information until it is correctly received and save time and messaging.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki in view of Sampath et al (US 20030012308A1).

Regarding claim 19, Suzuki discloses a system where the number of transmit antennas corresponds to the number of receive antennas (see figure 12). Suzuki fails to disclose the notification of the number of antennas.

In a similar field of endeavor, Sampath et al discloses a system where a characteristic signal generator 450 generates a characteristic signal, based on one or more estimated system characteristics and/or deterministic system characteristics, such as number of transmit antennas, spatial configuration of the transmit antennas and transmit diversity mode (see page 4, paragraph 50).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Suzuki with Sampath et al to include the above notification in

order to perform better channel estimation in a broad range of system environments which leads to advantages such as higher decoding error rates, lower information transmission rates and/or lower signal to noise ratios as suggested by Sampath et al (see page 1, paragraphs 10 and 11).

Regarding claim 20, Suzuki fails to expressly disclose the notification of supporting a protocol-assisted diversity operations.

In a similar field of endeavor, Sampath et al discloses a system where some slots provide header information for the frame, such as whether spatial multiplexing or transmit diversity is enabled for the frame (see page 3, paragraph 40), which reads on the claimed "a receiver notifying a transmitter that said receiver accepts and responds to protocol-assisted diversity operations".

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Suzuki with Sampath et al to include the above notification in order to perform better channel estimation in a broad range of system environments which leads to advantages such as higher decoding error rates, lower information transmission rates and/or lower signal to noise ratios as suggested by Sampath et al (see page 1, paragraphs 10 and 11).

(10) Response to Argument

CLAIM 1

The applicant argues with respect to claim 1 that Suzuki fails to disclose switching between a first and a second antenna in response to a predefined schedule of a sequence of scheduled packet bursts. The examiner respectfully disagrees. As

discussed in the final rejection, Suzuki teaches switching between antennas (see column 9, lines 13-26) in a TDMA system (see column 6, lines 12-19). In a TDMA system, each mobile station in a network is given a time slot to monitor for transmissions from the base station. A message would be sent in bursts during the particular timeslot of the mobile station. Therefore, transmissions must be scheduled to coincide with the particular timeslot of the mobile station to be contacted, so all transmissions are in a predefined schedule of a sequence of scheduled packet bursts. The applicant notes in the brief the polling implemented between the receiver and base station so that the scheduling is synchronized. The polling, while not referred to in the claim, is very similar to the synchronization performed by a base station and a mobile station in a TDMA system.

The applicant further argues that the examiner has interpreted TDMA too broadly, and specifically that the examiner has failed to explain how a TDMA system anticipates switching between a first antenna and a second antenna in response to a predefined schedule of a sequence of scheduled packet bursts. The examiner respectfully disagrees. The examiner relies on the use of TDMA only to teach that the transmissions are in a predefined schedule of a sequence of scheduled packet bursts, as described above in the rejection. The examiner relies on the disclosure of Suzuki to teach switching between a first antenna and a second antenna in response to burst data (see column 9, lines 13-26). The fact that the system is TDMA (see column 6, lines 12-19) supports the claimed use of a predefined schedule of a sequence of scheduled packet bursts. The examiner maintains that the switching between antennas

in response to burst data in a TDMA system as taught by Suzuki does teach the limitations of a switching between antennas in response to burst data in a predefined schedule.

The applicant further argues that TDMA does not teach a predefined schedule of packet bursts, but rather a sequence of packet bursts. The examiner respectfully disagrees. Transmissions in TDMA are in timeslots, with a guardband between each timeslot. Usually 10 timeslots make up a frame, and the frame is repeated. Each mobile station gets a timeslot, so the transmissions must be within this timeslot, which means they transmissions must be scheduled. The applicant further argues that TDMA is not analogous to the predefined schedule because the time slots in TDMA are fixed. The examiner takes the admission that the timeslots are fixed to be further evidence that the schedule is predefined. The applicant argues that no useful information may ever be conveyed by the time period between two TDMA bursts because the time spacing is constant. However, the applicants' claimed invention does not call for conveying useful information between the time period between two TDMA bursts.

CLAIM 4

The same arguments made with respect to claim 1 by the applicant and the response above by the examiner applies to claim 4.

The applicant argues that Suzuki does not teach an RF switch control for switching between a first and second antenna in response to a predefined schedule of a sequence of scheduled packet bursts combined with the concept of switching the antennas in a manner that each antenna receives a related packet burst. The examiner

respectfully disagrees. As discussed above, Suzuki discloses an RF switch control for switching between a first and second antenna in response to a predefined schedule of a sequence of scheduled packet bursts (see response with respect to claim 1 above). As discussed in the final rejection, Suzuki discloses that an encoded signal dispersed into a plurality of symbols interleaved over a plurality of burst data (see column 8, line 62 – column 9, line 12), so the burst data are related as claimed. Each time the antenna switcher 72 receives burst data, the antenna switches the antenna under control of the communication control unit 78 (see column 9, lines 13-20 and figure 10), which reads on the claimed “the antennas are switched so that each antenna receives a related packet burst”.

CLAIM 8

The applicant argues that Suzuki fails to teach receiving packet bursts individually at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is used to select one of the plurality of antennas for receiving each of the packet bursts. The examiner respectfully disagrees. Suzuki teaches switching between antennas in response to burst data (see column 9, lines 13-26) in a TDMA system (see column 6, lines 12-19). In a TDMA system, each mobile station in a network is given a time slot to monitor for transmissions from the base station. A message would be sent in bursts during the particular timeslot of the mobile station. Therefore, transmissions must be scheduled to coincide with the particular timeslot of the mobile station to be contacted, so all transmissions are in a predefined schedule of a sequence of scheduled packet bursts. The applicant notes the polling

implemented between the receiver and base station so that the scheduling is synchronized. The polling, while not referred to in the claim, is very similar to the synchronization performed by a base station and a mobile station in a TDMA system.

The applicant further argues that the examiner has interpreted TDMA too broadly, and specifically that the examiner has failed to explain how a TDMA system anticipates switching between a first antenna and a second antenna in response to a predefined schedule of a sequence of scheduled packet bursts. The examiner respectfully disagrees. The examiner relies on the use of TDMA only to teach that the transmissions are in a predefined schedule of a sequence of scheduled packet bursts, as described above in the rejection. The examiner relies on the disclosure of Suzuki to teach switching between a first antenna and a second antenna in response to burst data (see column 9, lines 13-26). The fact that the system is TDMA (see column 6, lines 12-19) supports the claimed use of a predefined schedule of a sequence of scheduled packet bursts. The examiner maintains that the switching between antennas in response to burst data in a TDMA system as taught by Suzuki does teach the limitations of a switching between antennas in response to burst data in a predefined schedule.

The applicant argues that TDMA does not teach a predefined schedule of packet bursts, but rather a sequence of packet bursts. The examiner respectfully disagrees. Transmissions in TDMA are in timeslots, with a guardband between each timeslot. Usually 10 timeslots make up a frame, and the frame is repeated. Each mobile station gets a timeslot, so the transmissions must be within this timeslot, which means they

transmissions must be scheduled. The applicant further argues that TDMA is not analogous to the predefined schedule because the time slots in TDMA are fixed. The examiner takes the admission that the timeslots are fixed to be further evidence that the schedule is predefined. The applicant argues that no useful information may ever be conveyed by the time period between two TDMA bursts because the time spacing is constant. The examiner does not see how this is relevant to the claimed invention.

CLAIM 9

The same arguments and response with respect to claim 8 apply to claim 9 as well.

The applicant argues that Suzuki fails to disclose individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for receiving each of the packet bursts combined with the aspect that each of the plurality of antennas is connected to a radio receiver at separate times relative to the other antennas. As discussed above, Suzuki discloses individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for receiving each of the packet bursts (see response to claim 8 above). As discussed in the final rejection, Suzuki discloses that one antennas 71a-m at a time is connected to the receiver circuitry 73-76 (see figure 10), and that the antennas may be selected in the previously-determined sequential order (see column 9, lines 21-24), which reads on the claimed "each of the

Art Unit: 2617

plurality of the antennas is connected to a radio receiver at separate times relative to other antennas.”

CLAIM 11

The same arguments and response for claim 8 apply to claim 11.

The applicant argues that Suzuki fails to teach individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for receiving each of the packet bursts combined with the aspect that a message is spread across the plurality packet bursts by space-time coding. As discussed above, Suzuki discloses individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for receiving each of the packet bursts (see response to claim 8 above). As discussed in the final rejection, Suzuki discloses a system where an encoded signal dispersed into a plurality of symbols interleaved over a plurality of burst data (see column 8, line 62 – column 9, line 12), which reads on the claimed “a message is spread across the plurality of packet bursts by space-time coding.”

CLAIM 13

The applicant argues that Suzuki fails to teach a communication system wherein a first antenna and a second antenna are sequentially enabled in accordance with a predefined schedule. The examiner respectfully disagrees. As discussed in the rejection, Suzuki teaches switching between antennas (see column 9, lines 13-26) in a TDMA system (see column 6, lines 12-19). In a TDMA system, each mobile station in a

network is given a time slot to monitor for transmissions from the base station. A message would be sent in bursts during the particular timeslot of the mobile station. Therefore, transmissions must be scheduled to coincide with the particular timeslot of the mobile station to be contacted, so all transmissions are in a predefined schedule of a sequence of scheduled packet bursts. The applicant notes the polling implemented between the receiver and base station so that the scheduling is synchronized. The polling, while not referred to in the claim, is very similar to the synchronization performed by a base station and a mobile station in a TDMA system.

The applicant further argues that the examiner has interpreted TDMA too broadly, and specifically that the examiner has failed to explain how a TDMA system anticipates switching between a first antenna and a second antenna in response to a predefined schedule of a sequence of scheduled packet bursts. The examiner respectfully disagrees. The examiner relies on the use of TDMA only to teach that the transmissions are in a predefined schedule of a sequence of scheduled packet bursts, as described above in the rejection. The examiner relies on the disclosure of Suzuki to teach switching between a first antenna and a second antenna in response to burst data (see column 9, lines 13-26). The fact that the system is TDMA (see column 6, lines 12-19) supports the claimed use of a predefined schedule of a sequence of scheduled packet bursts. The examiner maintains that the switching between antennas in response to burst data in a TDMA system as taught by Suzuki does teach the limitations of a switching between antennas in response to burst data in a predefined schedule.

The applicant argues that TDMA does not teach a predefined schedule of packet bursts, but rather a sequence of packet bursts. The examiner respectfully disagrees. Transmissions in TDMA are in timeslots, with a guardband between each timeslot. Usually 10 timeslots make up a frame, and the frame is repeated. Each mobile station gets a timeslot, so the transmissions must be within this timeslot, which means they transmissions must be scheduled. The applicant further argues that TDMA is not analogous to the predefined schedule because the time slots in TDMA are fixed. The examiner takes the admission that the timeslots are fixed to be further evidence that the schedule is predefined. The applicant argues that no useful information may ever be conveyed by the time period between two TDMA bursts because the time spacing is constant. The examiner does not see how this is relevant to the claimed invention.

CLAIM 15

The same arguments and response for claim 13 apply to claim 15.

The applicant argues that Suzuki fails to teach a communication system that comprises a first antenna and second antenna that are sequentially enabled in accordance with a predefined schedule to communicate with at least one storage medium at a receiver combined with the aspect that a first and second signal bursts are each part of a space-time coded message spread across two bursts and wherein a common message is derived from the sequential signal burst received by the antennas. The examiner respectfully disagrees. As discussed above, Suzuki discloses individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for

receiving each of the packet bursts (see response to claim 8 above). As discussed in the final rejection, Suzuki discloses that the plurality of symbols are part of the same signal (see column 8, line 62 – column 9, line 12), which reads on the claimed “the first and second signal bursts are each a part of a space-time coded message spread across two bursts.” The processing of the reception signal includes deinterleave processing for deinterleaving the switched signal over a plurality of burst data to provide data in the original order (see column 9, lines 45-53), which reads on the claimed “a common message is derived from the sequential signal bursts received by the first and second antennas.”

CLAIM 16

The same arguments and response for claim 13 apply to claim 16.

The applicant argues that Suzuki fails to teach a communication system that comprises a first antenna and second antenna that are sequentially enabled in accordance with a predefined schedule to communicate with at least one storage medium at a receiver combined with the aspect of retaining the first and second signal bursts in at least one storage medium and processing to deliver the single unified message. The examiner respectfully disagrees. As discussed above, Suzuki discloses individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for receiving each of the packet bursts (see response to claim 8 above). As discussed in the final rejection, Suzuki discloses that the reception signal is deinterleaved by deinterleaving circuit 75 so that it is reconverted into the original data

(see column 9, lines 31-35), which reads on the claimed "said enabling includes retaining the first and second signal bursts in said at least one storage medium and processing to deliver the single unified message."

CLAIM 18

The same arguments and response for claim 13 apply to claim 18.

The applicant argues that Suzuki fails to teach a communication system that comprises a first antenna and second antenna that are sequentially enabled in accordance with a predefined schedule to communicate with at least one storage medium at a receiver combined with the aspect of deriving a common message by decoding a space-time coded signal spread across and received by both the first and second antennas. The examiner respectfully disagrees. As discussed above, Suzuki discloses individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for receiving each of the packet bursts (see response to claim 8 above). As discussed in the final rejection, Suzuki discloses that the processing of the reception signal includes deinterleave processing for deinterleaving the switched signal over a plurality of burst data to provide data in the original order (see column 9, lines 45-53) and that the burst data are received on a plurality of antennas (see column 9, lines 18-20), which reads on the claimed "said deriving the common message includes selecting a message from one of the receiving antennas."

CLAIM 2

The applicant argues that Suzuki fails to disclose switching between a first antenna and second antenna in response to a predefined schedule of a sequence of scheduled packet bursts. The examiner respectfully disagrees. Suzuki teaches switching between antennas (see column 9, lines 13-26) in a TDMA system (see column 6, lines 12-19). In a TDMA system, each mobile station in a network is given a time slot to monitor for transmissions from the base station. A message would be sent in bursts during the particular timeslot of the mobile station. Therefore, transmissions must be scheduled to coincide with the particular timeslot of the mobile station to be contacted, so all transmissions are in a predefined schedule of a sequence of scheduled packet bursts.

The applicant argues that the combination of Suzuki and Aaronson fails to teach the invention. The examiner respectfully disagrees. Suzuki anticipates switching between a first antenna and second antenna in response to a predefined schedule of a sequence of scheduled packet bursts, as discussed above.

The same arguments and response applied to claim 1 apply to claim 2. The applicant argues the combination of Suzuki and Aaronson fails to teach an RF switch control for switching between a first and second antenna in response to a predefined schedule of a sequence of scheduled packet bursts combined with the concept scheduling sequence burst prescribed by a QoSs defined by a MAC protocol. The examiner respectfully disagrees. As discussed above, Suzuki discloses individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for

Art Unit: 2617

receiving each of the packet bursts (see response to claim 1 above). As discussed in the final rejection, Aaronson et al discloses a radio system where the MAC layer schedules communication bursts (see Aaronson column 4, lines 22-63) taking into account factors such as propagation delay between the different nodes, queuing of data and synchronization of the time transmitting from multiple nodes (see Aaronson column 3, lines 22-30), which reads on the claimed, "schedules sequence bursts prescribed by a QoS defined by a MAC protocol."

CLAIM 3

The same arguments and response applied to claim 1 apply to claim 3.

The applicant argues that the combination of Suzuki and Aaronson fails to teach an RF switch control for switching between a first and second antenna in response to a predefined schedule of a sequence of scheduled packet bursts in combination with the fact that the RF switch control is a MAC processor that is synchronized with transmission of a base station. The examiner respectfully disagrees. As discussed above, Suzuki discloses individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is used to select one of the antennas for receiving each of the packet bursts (see response to claim 1 above). As discussed in the final rejection, Aaronson et al discloses that the MAC algorithm should synchronize the time of transmitting from multiple nodes (see column 3, lines 22-29).

CLAIM 12

The applicant incorrectly states that claim 8 was rejected in the Office Action under 35 U.S.C. 103 as being unpatentable over Suzuki in view of Aaronson. Claim 8 was rejected in the Office Action under 35 U.S.C 102 as being anticipated by Suzuki.

The applicant argues that Suzuki fails to disclose switching between a first antenna and second antenna in response to a predefined schedule of a sequence of scheduled packet bursts. The examiner respectfully disagrees. Suzuki teaches switching between antennas (see column 9, lines 13-26) in a TDMA system (see column 6, lines 12-19). In a TDMA system, each mobile station in a network is given a time slot to monitor for transmissions from the base station. A message would be sent in bursts during the particular timeslot of the mobile station. Therefore, transmissions must be scheduled to coincide with the particular timeslot of the mobile station to be contacted, so all transmissions are in a predefined schedule of a sequence of scheduled packet bursts.

The applicant argues that the combination of Suzuki and Aaronson would only disclose a method and apparatus for transmitting and receiving data packets using a number of antennas, wherein each antenna, that receives the data packets, is chosen in a predetermined order or randomly. The examiner contends that the predetermined order in a TDMA environment (see Suzuki column 6, lines 12-19) reads on the applicants claimed invention using a predefined schedule of a sequence of scheduled packet bursts.

The same arguments and response applied to claim 8 apply to claim 12.

The applicant argues that the combination of Suzuki and Aaronson fails to teach individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for receiving each of the packet bursts combined with the notion that transmitting a message combines a protocol with signal processing. The examiner respectfully disagrees. As discussed above, Suzuki discloses individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for receiving each of the packet bursts (see response to claim 8 above). As discussed in the final rejection, Aaronson et al discloses a radio system where the MAC layer schedules communication bursts (see column 4, lines 22-63) taking into account factors such as propagation delay between the different nodes, queuing of data and synchronization of the time transmitting from multiple nodes (see column 3, lines 22-30).

CLAIM 5

The applicant argues that the combination of Ohashi and Khayrallah fail to disclose switching between a first antenna and second antenna in response to a predefined schedule of a sequence of scheduled packet bursts. The examiner respectfully disagrees. Ohashi discloses a diversity radio communication system where an antenna switch circuit 10 switches the first and second antennas 11 and 12 to connect them to the transmit/receive switch circuit 9 (see page 6, lines 1-8), which reads on the claimed invention that receives communications from a transceiver at a transmission station by wireless transceivers at receiving stations having switched

Art Unit: 2617

protocol diversity reception operational modes, and uses this configuration to receive data from first and second antennas. The received data is stored in the temporary memory 2 of the memory 3 (see page 6, lines 38-40), which reads on the claimed "recording the received bursts as soft information in a storage medium". Khayrallah discloses an improvement of time-diversity methods where a receiver cycles through groups of antennas and the antennas within a group are combined by the receiver chains (see paragraph 3), which reads on the claimed "combining the soft information from the first and second bursts into a single message". Furthermore, Khayrallah discloses that antenna switching is preferably but not necessarily done before a new slot is to be received, which reads on the claimed "enabling a first antenna to receive a first packet burst in accordance with said predefined schedule; enabling a second antenna to receive a second packet burst in accordance with said predefined schedule," wherein the system may be a TDMA system (see paragraph 5) so all transmissions and receptions are according to a predefined schedule.

The applicant argues that the combination of Ohashi and Khayrallah teaches a diversity radio communication system that would switch to a particular antenna chosen from a group of antennas; the receiver cycling through the groups of antennas in a predetermined order or at random. The examiner contends that cycling through the antennas in a predetermined order in a TDMA environment reads on the claimed invention of, "receiving scheduled communications from a transceiver at a transmission station in accordance with a predefined schedule...enabling a first antenna to receive a

first packet burst in accordance with said predefined schedule; enabling a second antenna to receive a second burst in accordance with said predefined schedule.”

CLAIM 6

The same arguments and response made for claim 5 apply to claim 6.

The applicant argues that the combination of Ohashi and Khayrallah fails to disclose receiving scheduled communications from a transceiver at a transmission station in accordance with a predefined schedule by wireless transceivers, wherein the scheduled communications are being formatted as multiple packet bursts, combined with the aspect that each packet burst contains the same complete message. The examiner respectfully disagrees. As discussed above, cycling through the antennas in a predetermined order in a TDMA environment reads on the claimed invention of, “receiving scheduled communications from a transceiver at a transmission station in accordance with a predefined schedule by wireless transceivers, wherein the scheduled communications are being formatted as multiple packet bursts.” As discussed in the final rejection, when a detected error is uncorrectable, the terminal unit on the receiver side recognizes it as a receiving error and sends a response indicating the error to the transmitter side, requesting re-transmission of the same data, and the same data is re-transmitted (see Ohashi et al page 10, line 57 – page 11, line 2) and simultaneously, the receiving error count is increased by 1 and the receiving antenna is switched (see Ohashi et al page 11, lines 39-47), so in this case the same data would be received by two different antennas as claimed.

CLAIM 7

The applicant argues that the combination of Ohashi, Khayrallah and Suzuki fails to teach switching between a first antenna and a second antenna in response to a predefined schedule of a sequence of scheduled packet bursts. The examiner respectfully disagrees. As discussed in the response to claim 5, Ohashi discloses a diversity radio communication system where an antenna switch circuit 10 switches the first and second antennas 11 and 12 to connect them to the transmit/receive switch circuit 9 (see page 6, lines 1-8), which reads on the claimed invention that receives communications from a transceiver at a transmission station by wireless transceivers at receiving stations having switched protocol diversity reception operational modes, and uses this configuration to receive data from first and second antennas. The received data is stored in the temporary memory 2 of the memory 3 (see page 6, lines 38-40), which reads on the claimed "recording the received bursts as soft information in a storage medium". Khayrallah discloses an improvement of time-diversity methods where a receiver cycles through groups of antennas and the antennas within a group are combined by the receiver chains (see paragraph 3), which reads on the claimed "combining the soft information from the first and second bursts into a single message". Furthermore, Khayrallah discloses that antenna switching is preferably but not necessarily done before a new slot is to be received, which reads on the claimed "enabling a first antenna to receive a first packet burst in accordance with said predefined schedule; enabling a second antenna to receive a second packet burst in accordance with said predefined schedule," wherein the system may be a TDMA

system (see paragraph 5) so all transmissions and receptions are according to a predefined schedule.

The applicant argues that the combination of Ohashi, Khayrallah and Suzuki would only disclose a diversity radio communication system that could send an encoded signal over a plurality of burst data that would switch to a particular antenna chosen from a group of antennas; the receiver cycling through the groups of antennas in a predetermined order or at random. The examiner contends that cycling through the antennas in a predetermined order in a TDMA environment reads on the claimed invention of, "receiving scheduled communications from a transceiver at a transmission station in accordance with a predefined schedule by wireless transceivers, wherein the scheduled communications are being formatted as multiple packet bursts."

The same arguments and response applied to claim 5 apply to claim 7.

The applicant argues that the combination of Ohashi, Khayrallah and Suzuki fails to teach receiving scheduled communications from a transceiver at a transmission station in accordance with a predefined schedule by wireless transceivers, wherein the scheduled communications are being formatted as multiple packet bursts, combined with the aspect that each packet burst contains a portion of a space-time coded message spread across a first and second packet bursts. The examiner respectfully disagrees. As discussed above, cycling through the antennas in a predetermined order in a TDMA environment reads on the claimed invention of, "receiving scheduled communications from a transceiver at a transmission station in accordance with a predefined schedule by wireless transceivers, wherein the scheduled communications

are being formatted as multiple packet bursts.” As discussed in the final rejection, Suzuki discloses a system that receives an encoded signal dispersed into a plurality of symbols interleaved over a plurality of burst data (see column 8, line 62 – column 9, line 12), which reads on the claimed “each packet burst contains a portion of a space-time coded message spread across the first and second packet bursts”.

CLAIM 10

The applicant argues that Suzuki fails to disclose switching between a first and second antenna in response to a predefined schedule of a sequence of scheduled packet bursts. The examiner respectfully disagrees. Suzuki teaches switching between antennas in response to burst data (see column 9, lines 13-26) in a TDMA system (see column 6, lines 12-19). In a TDMA system, each mobile station in a network is given a time slot to monitor for transmissions from the base station. A message would be sent in bursts during the particular timeslot of the mobile station. Therefore, transmissions must be scheduled to coincide with the particular timeslot of the mobile station to be contacted, so all transmissions are in a predefined schedule of a sequence of scheduled packet bursts.

The applicant argues that the combination of Suzuki and Struhsaker would teach a method and apparatus for transmitting and receiving packet data units that contain a complete message using a number of antennas; where each antenna that receives the packet data units is chosen in a predetermined order or randomly. The examiner contends that The examiner contends that cycling through the antennas in a predetermined order in a TDMA environment reads on the claimed invention of,

“switching between a first antenna and a second antenna in response to a predefined schedule of a sequence of scheduled packet bursts.”

The same arguments and response applied to claim 8 apply to claim 10.

The applicant argues that the combination of Suzuki and Struhsaker fails to teach individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is used to select one of the antennas for receiving each of the packet bursts combined with the aspect of including a complete message with each packet burst. The examiner respectfully disagrees. As discussed above, cycling through the antennas in a predetermined order in a TDMA environment reads on the claimed invention of, “individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is used to select one of the antennas for receiving each of the packet bursts.” As discussed in the final rejection, Struhsaker et al discloses that a packet data unit may be a complete packet transmission or a fragment of a much larger message (see page 12, paragraph 159).

CLAIM 14

The applicant argues that Suzuki fails to disclose switching between a first antenna and second antenna in response to a predefined schedule of a sequence of scheduled packet bursts. The examiner respectfully disagrees. As discussed above, Suzuki discloses switching between antennas in response to burst data (see column 9, lines 13-26) in a TDMA system (see column 6, lines 12-19). In a TDMA system, each mobile station in a network is given a time slot to monitor for transmissions from the

base station. A message would be sent in bursts during the particular timeslot of the mobile station. Therefore, transmissions must be scheduled to coincide with the particular timeslot of the mobile station to be contacted, so all transmissions are in a predefined schedule of a sequence of scheduled packet bursts.

The same arguments and the same response applied to claim 13 apply to claim 14.

The applicant argues that the combination of Suzuki and Ohashi fails to disclose a communication system that comprises a first antenna and second antenna that are sequentially enabled in accordance with a predefined schedule to communicate with at least one storage medium at a receiver combined with the aspect that a first and second signal bursts are identical packets of a common message. The examiner respectfully disagrees. As discussed above, cycling through the antennas in a predetermined order in a TDMA environment reads on the claimed invention of, "a first antenna and second antenna that are sequentially enabled in accordance with a predefined schedule to communicate with at least one storage medium at a receiver." As discussed in the final rejection, Ohashi et al discloses that when a detected error is uncorrectable, the terminal unit on the receiver side recognizes it as a receiving error and sends a response indicating the error to the transmitter side, requesting re-transmission of the same data, and the same data is re-transmitted (see page 10, line 57 – page 11, line 2), which reads on the claimed "first and second signal bursts are identical packets of a common message".

CLAIM 17

The same arguments and the same response applied to claim 13 apply to claim 17.

The applicants argue that the combination of Suzuki and Ohashi fails to disclose a communication system that comprises a first antenna and second antenna that are sequentially enabled in accordance with a predefined schedule to communicate with at least one storage medium at a receiver combined with deriving a common message by selecting a message from one of the antennas. The examiner respectfully disagrees. As discussed above, cycling through the antennas in a predetermined order in a TDMA environment reads on the claimed invention of, "a first antenna and second antenna that are sequentially enabled in accordance with a predefined schedule to communicate with at least one storage medium at a receiver." As discussed in the final rejection, Ohashi et al discloses a system where, when an error is detected, the antenna is switched and the information is re-transmitted (see page 10, line 57 – page 11, line 2), which reads on the claimed "selecting a message from one of the antennas".

CLAIM 21

The same arguments and response applied to claim 8 apply to claim 21.

The applicants argue that the combination of Suzuki and Ohashi fails to disclose individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for receiving each of the packet bursts combined with the notion that upon reconstruction of a received message, sending a message to a transmitting end to cease further message bursts. The examiner respectfully disagrees. As discussed

Art Unit: 2617

above, cycling through the antennas in a predetermined order in a TDMA environment reads on the claimed invention of, "individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for receiving each of the packet bursts."

As discussed in the final rejection, Ohashi et al discloses a system where, when an error occurs, a response indicating the error is sent to the transmitting end, requesting re-transmission of the same data (see page 10, line 57 – page 11, line 2), and this process is continued until a re-transmission upper-limit is reached (see page 11, lines 5-14). If no error occurs, no message requesting re-transmission is sent.

CLAIM 19

The applicant argues that Suzuki fails to disclose switching between a first antenna and second antenna in response to a predefined schedule of a sequence of scheduled packet bursts. The examiner respectfully disagrees. As discussed above, Suzuki discloses switching between antennas in response to burst data (see column 9, lines 13-26) in a TDMA system (see column 6, lines 12-19). In a TDMA system, each mobile station in a network is given a time slot to monitor for transmissions from the base station. A message would be sent in bursts during the particular timeslot of the mobile station. Therefore, transmissions must be scheduled to coincide with the particular timeslot of the mobile station to be contacted, so all transmissions are in a predefined schedule of a sequence of scheduled packet bursts.

The same arguments and the same response applied to claim 8 apply to claim 19.

The applicant argues that the combination of Suzuki and Sampath fails to disclose individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for receiving each of the packet bursts combined notifying a transmitter at a transmitting end by a receiving end of a number of a number of antennas and radio receivers at the receiving end. The examiner respectfully disagrees. As discussed above, cycling through the antennas in a predetermined order in a TDMA environment reads on the claimed invention of, "individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for receiving each of the packet bursts." As discussed in the final rejection, Sampath et al discloses a system where a characteristic signal generator 450 generates a characteristic signal, based on one or more estimated system characteristics and/or deterministic system characteristics, such as number of transmit antennas, spatial configuration of the transmit antennas and transmit diversity mode (see page 4, paragraph 50).

CLAIM 20

The same arguments and the same response applied to claim 8 apply to claim 20.

The applicant argues that the combination of Suzuki and Sampath fails to disclose individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for receiving each of the packet bursts combined with a receiver notifying a

transmitter that the receiver accepts and responds to protocol-assisted diversity operations. The examiner respectfully disagrees. As discussed above, cycling through the antennas in a predetermined order in a TDMA environment reads on the claimed invention of, "individually receiving packet bursts at one of a plurality of antennas in accordance with a predefined schedule, wherein the predefined schedule is use to select one of the antennas for receiving each of the packet bursts." As discussed in the final rejection, Sampath et al discloses a system where some slots provide header information for the frame, such as whether spatial multiplexing or transmit diversity is enabled for the frame (see page 3, paragraph 40), which reads on the claimed "a receiver notifying a transmitter that said receiver accepts and responds to protocol-assisted diversity operations".

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Bryan Fox



Conferees:

Charles Appiah



CHARLES N. APPIAH
SUPERVISORY PATENT EXAMINER

Lester Kincaid



LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER